

IN THE CLAIMS

Claim 1. (Currently Amended) An audio reproducing apparatus, comprising:

a distributing circuit receiving input audio signals of N channels including at least front and back left channel directional components, and front and back right channel directional components, and including a sound field image signal, for; said distributing circuit processing said sound field image signal to produce at least two processed signals for adding which are added to at least some of said input audio signals, whereby said distributing circuit generates and for generating audio signals of N-1 channels that represent the positions of sound images at least corresponding to the front and back left channel directional components and the front and back right channel directional components as sound image components;

a first signal processing circuit for processing the audio signals of N-1 channels output from the distributing circuit on each channel so as to produce output audio signals having an equivalent sound field of M (where M ≤ N-1) electrical - acoustic converting units; and

a second signal processing circuit for receiving the audio signals from the first signal processing circuit and equivalently processing the audio signals corresponding to

transfer functions from the M electric - acoustic converting units to both ears of the listener, wherein the output audio signals of the second signal processing circuit are reproduced with the M electric - acoustic converting units.

Claim 2. (Currently Amended) An audio reproducing apparatus, comprising:

a distributing circuit receiving input audio signals of N channels including a sound field image signal, front and back left channel directional components, and front and back right channel directional components, the distributing circuit including a variable attenuating circuit receiving the sound field image signal, whereby varying amounts of the sound field image signal are added to at least some of the audio signals of N channels, said distributing circuit outputting audio signals that represent positions of the sound images of N-1 channels;

a first signal processing circuit for processing the audio signals of N-1 channels output from the distributing circuit on each channel so as to produce output audio signals having an equivalent sound field of M (where  $M \leq N-1$ ) electrical - acoustic converting units; and

a second signal processing circuit for receiving the audio signals from the first signal processing circuit and

equivalently processing the audio signals corresponding to transfer functions from the M electric - acoustic converting units to both ears of the listener,

wherein the output audio signals of the second signal processing circuit are reproduced with the M electric - acoustic converting units.

Claims 3-7. (Cancelled)

Claim 8. (previously presented) The audio reproducing apparatus as set forth in claims 1 or 2 further comprising:

output means for supplying the output audio signals of the first signal processing circuit to an outside of the apparatus;

detecting means for detecting a motion of the head of the listener;

controlling means for controlling the second signal processing circuit corresponding to an output signal of the detecting means; and

means for wirelessly supplying the output audio signals of the second signal processing circuit to the M electric - acoustic converting units.